

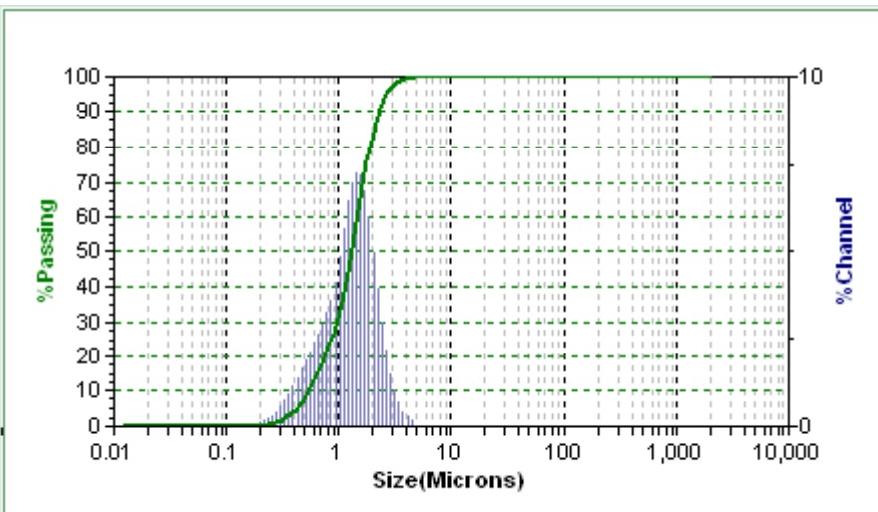


Size Distributions and Characterization of Native and Ground Samples for Toxicology studies

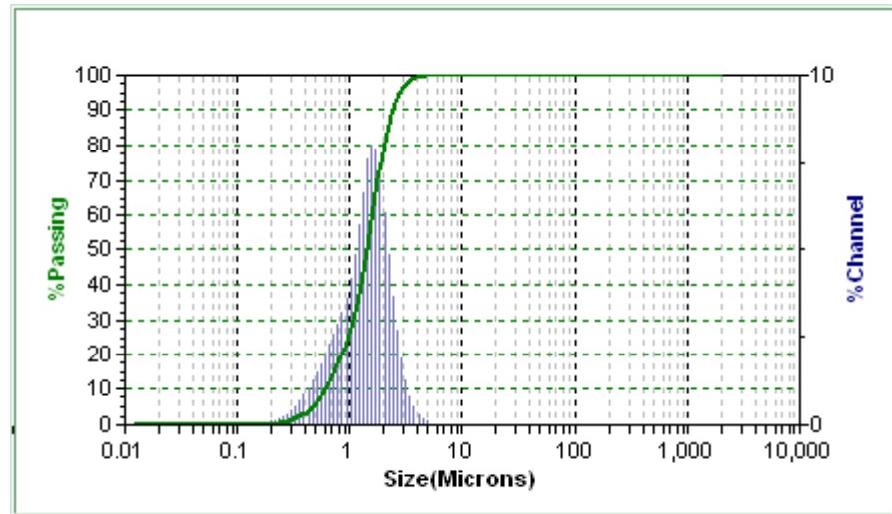
David S. McKay
Larry A. Taylor
Bonnie L. Cooper
Geology Team



Natural and Ground Dusts Particle Size Distribution

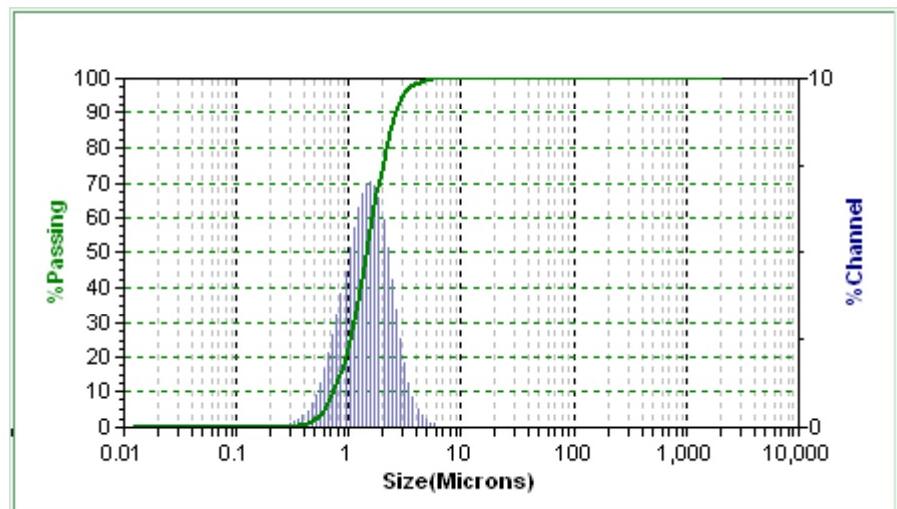


Jet-Mill-Ground, then separated: (Rec. # 1741)
Median = 1.300 um; St. Dev = 0.673



Ball-Mill-Ground, then separated: (Rec. # 1737)
Median = 1.427 μ m; St.Dev. = 0.689 (IPA)

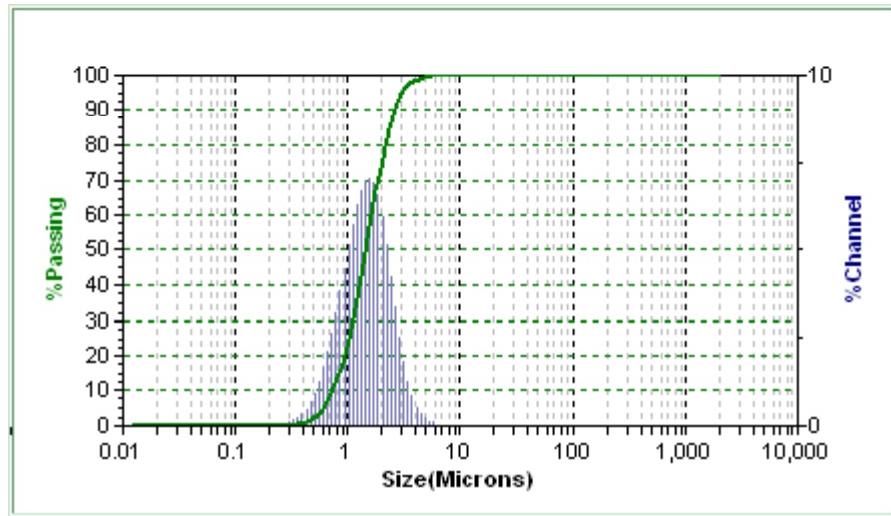
Natural Dust: (Rec. # 675)
Median = 1.448 um; St. Dev = 0.717



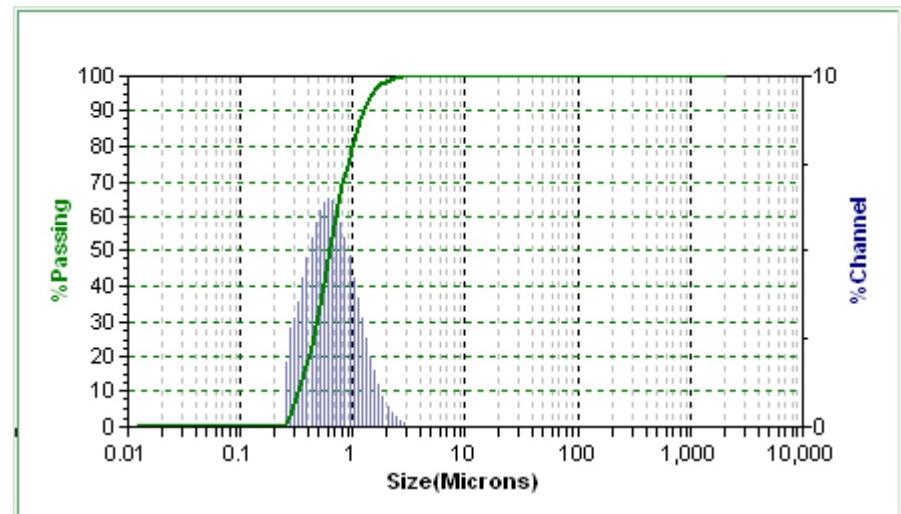


Natural Dust

Volume Distribution versus Number Distribution



Volume Distribution
Median = 1.448 um; St. Dev = 0.717

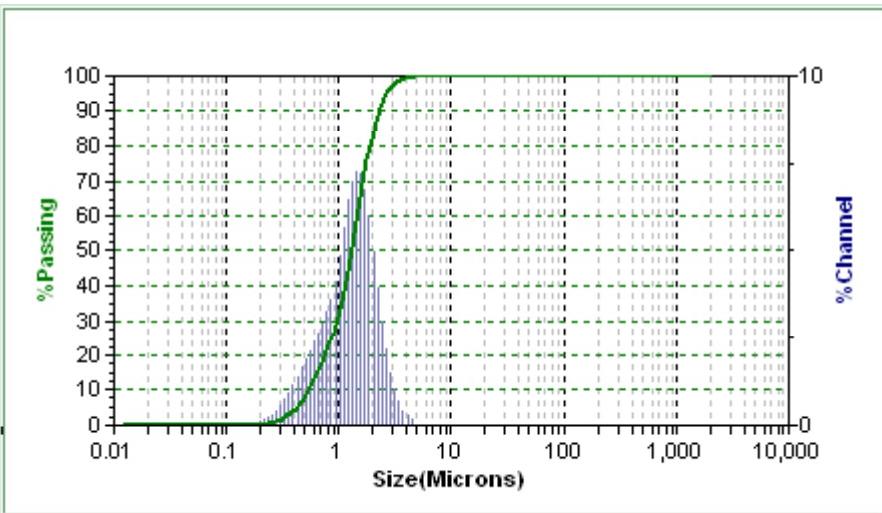


Number Distribution
Median = 0.625 um; St. Dev = 0.347

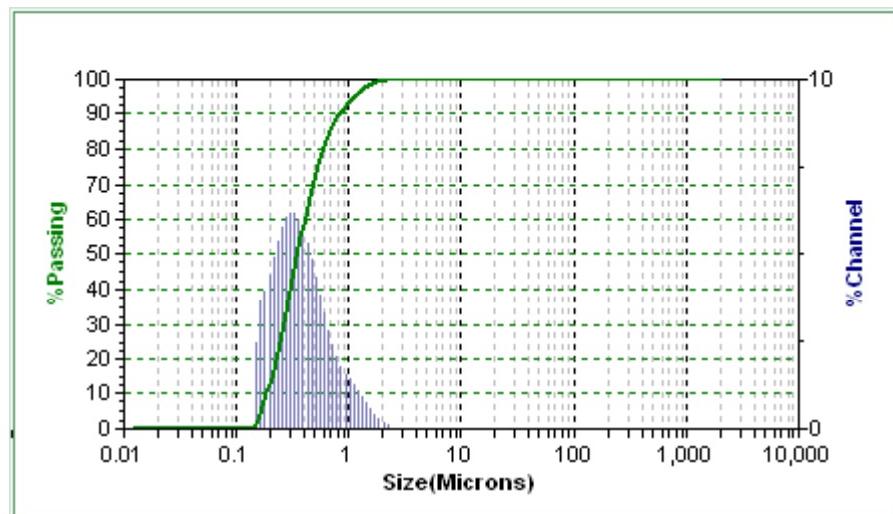


Jet-Mill-Ground Dust

Volume Distribution versus Number Distribution



Volume Distribution:
Median = 1.300 um; St. Dev = 0.673

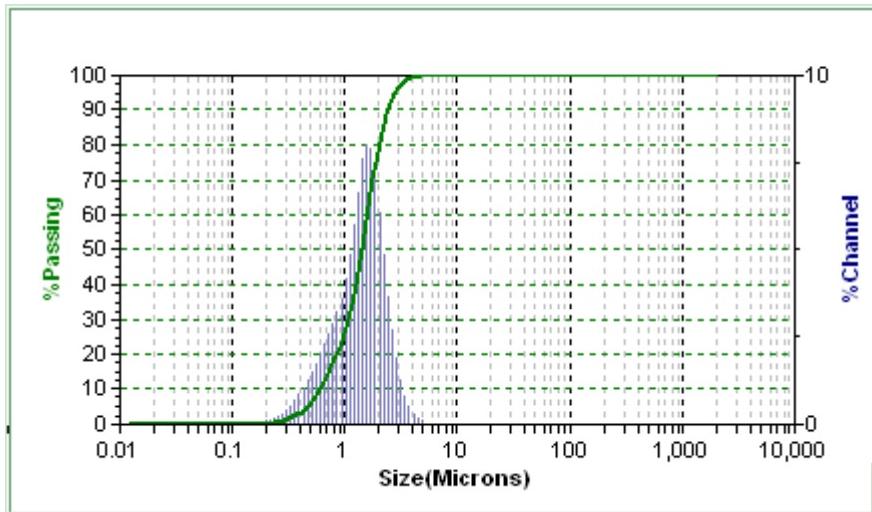


Number Distribution:
Median = 0.349 μm ; St.Dev. = 0.225

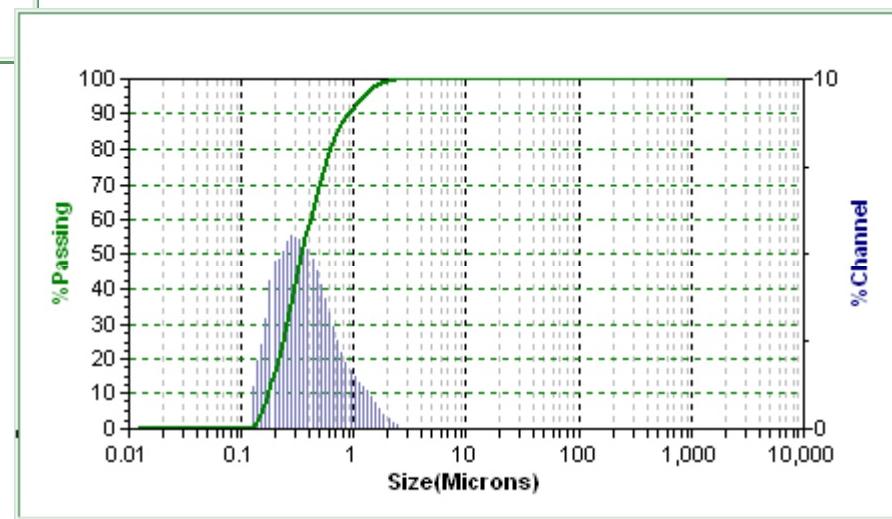


Ball-Mill-Ground Dust

Volume Distribution versus Number Distribution



Volume Distribution
Median = $1.427\mu\text{m}$; St.Dev. = 0.689



Number Distribution:
Median = $0.347 \mu\text{m}$; St.Dev. = 0.252



Dust Comparison

	Volumetric Median	Volumetric Std. Dev.	Number Median	Number Std. Dev.	Comparison
Natural Dust	1.448	0.717	0.625	0.347	Medium
Ball-Mill-Ground Dust	1.485	0.689	0.347	0.252	Most Values Lower
Jet-Mill-Ground Dust	1.300	0.673	0.349	0.225	All Values Lower